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(54) STENT DELIVERY SYSTEM

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(56) References Cited

U.S. PATENT DOCUMENTS

8,455,094 B2 6/2013 Omata et al.

(Continued)

FOREIGN PATENT DOCUMENTS

JP 2003-062078 A 3/2003 JP 2005-520639 A 7/2005 (Continued)

OTHER PUBLICATIONS

Office Action issued on Aug. 18, 2015, by the Japan Patent Office in corresponding Japanese Patent Application No. 2012-557800, and an English Translation of the Office Action. (11 pages).

(Continued)

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(57) ABSTRACT

To provide a stent delivery system that can limit/prevent drop-off or shifting of a stent from the balloon. A stent delivery system that is equipped with a main tube-shaped shaft, a balloon provided on the tip of the main shaft, and a stent fitted so as to encircle the balloon, wherein a layer for preventing stent drop-off containing a compound with multiple thiol groups is formed on at least a portion of the balloon surface, and at least the portion of the stent that contacts the stent drop-off preventing layer is made of metal.

15 Claims, 5 Drawing Sheets

